

### REMARKS

The specification has been amended at page 1 to update information identifying related applications. Claims 1, 15 and 25 have been amended. Claims 1-38 remain in the application.

Claims 1 and 15 have been amended by limitation of elements to being "in a bidirectional line switch ring system" and Claims 1, 15 and 25 have been amended by limitation of decoding and encoding to "forward error correction" operations or devices. These amendments are supported in the specification at page 2, lines 5-12 and at page 6, lines 9-18, and therefore do not introduce new matter.

Claims 1-38 have been rejected for anticipation by US Patent 6,671,271 ("Takemura"). That rejection is respectfully rejected for the following reasons.

Claim 1 has been amended to recite a method for diagnostic multicast crossbar switching in an integrated circuit (IC) digital communication relay device, which includes the steps of:

"establishing a first and second input path *in a bidirectional line switch ring system* to receive communications *in the bidirectional line switch ring system*;

establishing a first and second output path *in the bidirectional line switch ring system* to supply communications *to the bidirectional line switch ring system*;

selectively passing communications from the first input to the first and second outputs;

selectively passing communications from the second input to the first and second outputs;

selectively decoding received communications *by a forward error correction coding (FEC) operation*; and

selectively encoding supplied communications *by a FEC operation*". (Applicants' emphasis.)

Takemura's Sonet synchronous payload envelope pointer control system is designed to provide STS-ATM interfacing in add-drop multiplexers to allow adding ATM signals to and dropping ADM signals from a Sonet interface. Takemura therefore teaches passing Sonet signals from a Sonet input to a multiplexer and then passing Sonet signals from the multiplexer to a Sonet output. But Takemura does not teach passing Sonet signals received on inputs in the Sonet system to outputs and/or other

inputs in the Sonet system. Accordingly, Takemura omits the first four steps of amended claim 1.

Forward error correction (FEC) decoding and encoding operations are conducted on signals in the electronic signal portion of the electromagnetic spectrum by appending redundant data to actual data so that certain kinds of errors can be detected and corrected. These operations are not conducted on signals in the optical portion of the spectrum; they do not change communication formats. The decoding and encoding steps of claim 1 are limited to FEC operations. As pointed out in the Office Action, the decoding and encoding operations conducted in Takemura are optical to electrical and/or electrical to optical, which are essentially frequency conversions, or are communication format conversion operations (ATM to/from STS). Takemura's description of the sonet synchronous payload envelope pointer control system omits any FEC coding or decoding. Accordingly, Takemura omits the last two steps of amended claim 1.

Takemura therefore does not anticipate claims 1-14. Takemura also does not infringe claims 15-24 for the same reasons.

Claim 25 has been amended to recite an integrated circuit (IC) digital communications relay device for diagnostic multicast crossbar switching, which has

- "a first input port;

- a first output port;

- a second input port;

- a second output port;

- a decoder for decoding and correcting forward error correction (FEC)-coded communications, the decoder having an input to accept said FEC-coded communications, the decoder having an output to supply FEC-decoded and forward error-corrected communications;

- an encoder for FEC-coding communications, the encoder having an input, and the encoder having an output to supply FEC-coded communications;

- a switch system connected to the first and second input ports, the first and second output ports, the input and output of the decoder, and the input and output of the encoder, the switch system having an input to accept switching commands for selectively making connections among the first and second input ports, the first and second output ports, the input and output of the decoder, and the input and output of the encoder."

The decoder and encoder of claim 25 conduct forward error correction (FEC) decoding and encoding operations. Such operations are conducted on signals in the electronic signal portion of the electromagnetic spectrum; they are not conducted on signals in the optical portion of the spectrum. The decoder and encoder of claim 25 are limited to FEC operations. As pointed out in the Office Action, the decoding and encoding operations conducted in Takemura are optical to electrical and/or electrical to optical, which are essentially frequency conversions, or are format conversion operations (ATM to/from STS). Takemura's description of the sonet synchronous payload envelope pointer control system omits any FEC decoder or encoder. Accordingly, Takemura omits at least the fifth and sixth elements of amended claim 25.

Takemura therefore does not anticipate claims 25-38.

Accordingly, in view of the amendments and remarks made in this paper, all claims in the application are patentably distinct from the references of record, early notice of which is earnestly solicited.

Respectfully submitted,



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